



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-0882; Project Identifier MCAI-2021-01370-T; Amendment 39-22261; AD 2022-25-05]

RIN 2120-AA64

Airworthiness Directives; Airbus Canada Limited Partnership (Type Certificate Previously Held by C Series Aircraft Limited Partnership (CSALP); Bombardier, Inc.) Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Airbus Canada Limited Partnership Model BD-500-1A10 and BD-500-1A11 airplanes. This AD was prompted by a report that corrosion and wear were discovered on the slat tracks due to insufficient grease applied to the slat tracks during production. This AD requires repetitive cleaning and greasing of all slat tracks to prevent damage and corrosion; doing repetitive inspections of the slat tracks for any damage or corrosion, and the correct application of grease; and applicable corrective actions; as specified in a Transport Canada AD, which is incorporated by reference. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES:

AD Docket: You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2022-0882; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

Material Incorporated by Reference:

- For material incorporated by reference in this AD, contact Transport Canada, Transport Canada National Aircraft Certification, 159 Cleopatra Drive, Nepean, Ontario K1A 0N5, Canada; telephone 888-663-3639; email AD-CN@tc.gc.ca; website tc.canada.ca/en/aviation.

- You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2022-0882.

FOR FURTHER INFORMATION CONTACT: Chirayu Gupta, Aerospace Engineer, Mechanical Systems and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; email 9-avs-nyaco-cos@faa.gov.

SUPPLEMENTARY INFORMATION:**Background**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Airbus Canada Limited Partnership Model BD-500-1A10 and BD-500-1A11 airplanes. The NPRM published in the *Federal*

Register on July 21, 2022 (87 FR 43456). The NPRM was prompted by CF-2021-43, dated November 29, 2021, issued by Transport Canada, which is the aviation authority for Canada (Transport Canada AD CF-2021-43) (referred to after this as the MCAI). The MCAI states that corrosion and wear were discovered on the slat tracks due to insufficient grease applied to the slat tracks during production. The MCAI adds that corrosion and wear on the slat tracks could lead to loss of one or more slat panels or loss of slat track guidance and consequently cause catastrophic structural damage to the wings or other parts of the airplane due to slat panels departing from the airplane.

In the NPRM, the FAA proposed to require repetitive cleaning and greasing of all slat tracks to prevent damage and corrosion; doing repetitive inspections of the slat tracks for any damage or corrosion, and the correct application of grease; and applicable corrective actions, as specified in Transport Canada AD CF-2021-43. The FAA is issuing this AD to address the unsafe condition on these products.

You may examine the MCAI in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2022-0882.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from Delta Air Lines (Delta). The following presents the comments received on the NPRM and the FAA's response to each comment.

Request to Remove or Extend Timeframe for Reporting Requirement

Delta requested that the proposed AD be revised to not require reporting inspection results. Delta added that if reporting is required, the reporting timeframe should be extended to 90 days. Delta stated that Transport Canada AD CF-2021-43 was released in 2021 and Airbus Canada Limited Partnership has already received significant data from other operators. Delta added that continuing to require reporting does not provide additional safety. Delta further noted that the 30 day reporting compliance time

in the proposed AD adds an unnecessary burden, and extending the compliance time to 90 days significantly reduces that burden.

The FAA disagrees with the commenter's requests. Airbus Canada Limited Partnership is analyzing the inspection results to assist in their ongoing investigation and help determine if further corrective actions are needed. Regarding the compliance time, the FAA notes that Transport Canada AD CF-2021-43 specifies to report within 30 days, which aligns with the FAA's standard compliance time for inspection reports. The FAA and Airbus Canada concur with Transport Canada's decision. However, once this AD is published, any person may request approval of an AMOC under the provisions of paragraph (i)(1) of this AD. The FAA has not revised this AD regarding this issue.

Request to Clarify Grease Levels for Reporting

Delta requested that if reporting is required, the FAA clarify what constitutes thick or thin levels of grease. Delta noted that Appendix 1 of Spirit Service Bulletin 500SHW-57-4201, Issue 001, dated November 17, 2021, specifies to report to specify whether the level of grease is thick or thin, but does not specify what measurements qualify as thick or thin.

The FAA agrees to clarify. The FAA has added paragraph (h)(6) of this AD to specify the criteria for a thick or thin application of grease.

Request to Clarify the Intent of Paragraph (h)(4) of the Proposed AD

Delta requested that the FAA clarify the intent of paragraph (h)(4) of the proposed AD. Delta added that it interprets the meaning to be that where Transport Canada AD CF-2021-43 states "in accordance with the applicable SB and only Part B (or Part A) of the VSB" it should be read as "in accordance with only Part B (or Part A) of the VSB." Delta added that if its interpretation is incorrect, paragraph (h)(4) of the proposed AD should be rewritten to clearly emphasize the correct interpretation.

The FAA agrees to clarify. Delta’s interpretation of paragraph (h)(4) of this AD is correct. This AD requires using only the applicable part of “the VSB [vendor service bulletin]” as defined in Transport Canada AD CF-2021-43, instead of both “the VSB” and “the applicable SB” as defined in Transport Canada AD CF-2021-43. The FAA has revised paragraph (h)(4) of this AD to clarify.

Request to Clarify the Meaning of “Vendor Service Information”

Delta requested that paragraph (h)(3) of the proposed AD to clarify the meaning of “vendor service information.” Delta noted that it believes “vendor service bulletin” means Spirit Service Bulletin 500SHW-57-4201, Issue 001, dated November 17, 2021, but Transport Canada AD CF-2021-43 does not use the phrase “vendor service information.”

The FAA agrees to clarify. The phrase “vendor service bulletin” is referring to Spirit Service Bulletin 500SHW-57-4201, Issue 001, dated November 17, 2021, which Transport Canada AD CF-2021-43 defines as “the VSB.” The FAA has revised paragraph (h)(3) of this AD to specify “the VSB” for consistency with the terminology in Transport Canada AD CF-2021-43.

Request to Exclude Job Set-up and Job Close-Out Procedures

Delta asked for clarification whether the job set-up and job close-out procedures of Spirit Service Bulletin 500SHW-57-4201, Issue 001, dated November 17, 2021, are required for compliance with the proposed AD. Delta noted that Airbus Canada Limited Partnership Service Bulletin BD500-574001, Issue 001, dated November 22, 2021, contains a note specifying that the procedures section of the Accomplishment Instructions are required for compliance, while the job set-up and job close-out sections, with the exception of return-to-service tests, are recommended and can be deviated from, provided certain conditions are met. Delta added that Spirit Service Bulletin 500SHW-57-4201, Issue 001, dated November 17, 2021, does not contain a similar note and asked for

confirmation that the note also applies to Spirit Service Bulletin 500SHW-57-4201, Issue 001, dated November 17, 2021.

The FAA agrees to clarify. The note applies only to Airbus Canada Limited Partnership Service Bulletin BD500-574001, Issue 001, dated November 22, 2021. However, the FAA has determined the “Job set-up” and “Job close-out” sections of Spirit Service Bulletin 500SHW-57-4201 are recommended steps that can be used at the operator’s discretion. Therefore, the FAA has added paragraph (h)(7) of this AD to specify that only section 2. Procedure of the Accomplishment Instructions of “the VSB” is required by this AD.

Request to allow a Transport Canada Global Alternative Method of Compliance (AMOC)

Delta requested that the proposed AD be revised to allow the use of Transport Canada AMOC AARDG-2022/A09 when complying with the proposed AD. Delta noted that operators reported difficulty completing the inspection and grease application without removing the slat track from the airplane. Delta added that Transport Canada concluded that the AMOC procedures provide an equivalent level of safety as those specified in the service information.

The FAA agrees with the intent of the commenter’s request. The FAA does not have a process to directly adopt AMOCs issued by Transport Canada, and also cannot allow an AMOC until a final rule has been issued. However, the FAA has added paragraphs (h)(8) and (9) of this AD to allow the provisions specified in the Transport Canada AMOC.

Conclusion

This product has been approved by the aviation authority of another country and is approved for operation in the United States. Pursuant to the FAA’s bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA reviewed the relevant data,

considered the comment received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on this product. Except for minor editorial changes, and any other changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Related Service Information Under 1 CFR Part 51

Transport Canada AD CF-2021-43 specifies procedures for repetitive cleaning and greasing of all slat tracks, including the slat track rollers, the slat pinion gear bearings, and the slat pinion gears to prevent damage (e.g., metal wear) and corrosion; doing repetitive general visual inspections of the slat tracks for any damage or corrosion, and the correct application of grease; and applicable corrective actions. Corrective actions include repairs, rework, measurements of the reworked area, and a magnetic particle inspection of the reworked area for any cracking. Transport Canada AD CF-2021-43 also specifies procedures for reporting the inspection findings. This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Interim Action

The FAA considers that this AD is an interim action. If final action is later identified, the FAA might consider further rulemaking then.

Costs of Compliance

The FAA estimates that this AD affects 61 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated costs for required actions*

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Up to 15 work-hours X \$85 per hour = Up to \$1,275	\$0	Up to \$1,275	Up to \$77,775

*Table does not include estimated costs for reporting.

The FAA estimates that it will take about 1 work-hour per product to comply with the reporting requirement in this AD. The average labor rate is \$85 per hour. Based on these figures, the FAA estimates the cost of reporting the inspection results on U.S. operators to be \$5,185, or \$85 per product.

The FAA estimates the following costs to do any necessary on-condition actions that would be required based on the results of any required actions. The FAA has no way of determining the number of aircraft that might need these on-condition actions:

Estimated costs of on-condition actions

Labor cost	Parts cost	Cost per product
8 work-hours X \$85 per hour = \$680	\$0	\$680

The FAA has received no definitive data on which to base the cost estimates for the repair specified in this AD.

Paperwork Reduction Act

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to take approximately 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of

information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to: Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2022-25-05 Airbus Canada Limited Partnership (Type Certificate Previously Held by C Series Aircraft Limited Partnership (CSALP); Bombardier, Inc.): Amendment 39-22261; Docket No. FAA-2022-0882; Project Identifier MCAI-2021-01370-T.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Airbus Canada Limited Partnership Model BD-500-1A10 and BD-500-1A11 airplanes, certificated in any category, as identified in Transport Canada AD CF-2021-43, dated November 29, 2021 (Transport Canada AD CF-2021-43).

(d) Subject

Air Transport Association (ATA) of America Code 57, Wings.

(e) Unsafe Condition

This AD was prompted by a report that corrosion and wear were discovered on the slat tracks due to insufficient grease applied to the slat tracks during production. The FAA is issuing this AD to address corrosion and wear on the slat tracks, which could lead to loss of one or more slat panels or loss of slat track guidance and consequently cause catastrophic structural damage to the wings or other parts of the airplane due to slat panels departing from the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Requirements

Except as specified in paragraph (h) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, Transport Canada AD CF-2021-43.

(h) Exceptions to Transport Canada AD CF-2021-43

(1) Where Transport Canada AD CF-2021-43 refers to its effective date, this AD requires using the effective date of this AD.

(2) Where Transport Canada AD CF-2021-43 refers to hours air time, this AD requires using flight hours.

(3) Where “the VSB [vendor service bulletin]” referenced in Transport Canada AD CF-2021-43 specifies to do a magnetic particle inspection or an eddy current inspection of the repaired area for any cracking, for this AD if any cracking is found, the cracking must be repaired before further flight using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada; or Airbus Canada Limited Partnership’s Transport Canada Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(4) Where Transport Canada AD CF-2021-43 specifies to accomplish certain actions using both the “applicable SB” and “the VSB” as defined in Transport Canada AD CF-2021-43, this AD requires using only “the VSB.”.

(5) Paragraph C. of Transport Canada AD CF-2021-43 specifies to report inspection results to Airbus Canada Limited Partnership within a certain compliance time. For this AD, report inspection results at the applicable time specified in paragraph (h)(5)(i) or (ii) of this AD.

(i) If the inspection was done on or after the effective date of this AD: Submit the report within 30 days after the inspection.

(ii) If the inspection was done before the effective date of this AD: Submit the report within 30 days after the effective date of this AD.

(6) Where “the VSB” referenced in Transport Canada AD CF-2021-43 specifies to record the level of grease (thin or thick), for this AD a thin grease level is one that uniformly covers the slat tracks, slat track rollers, slat pinion gear bearings, and the slat pinion gears; and a thick grease level is one that extends beyond the slat tracks, slat track rollers, slat pinion gear bearings, and the slat pinion gears or that inhibits function of the slat tracks.

(7) Where Transport Canada AD CF-2021-43 specifies accomplishing certain actions using “the VSB,” for this AD replace the text “Part A of the VSB” with “section 2., Procedure, of Part A of the VSB.” and replace the text “Part B of the VSB” with “section 2., Procedure, of Part B of the VSB.”

(8) Where step 2.7 of Part B of “the VSB” referenced in Transport Canada AD CF-2021-43 specifies to inspect certain areas of the slat tracks, this AD allows inspecting as specified in paragraphs (h)(8)(i) and (ii) of this AD.

(i) For slat tracks 1 through 3 on the left and right wings: Inspect the upper and lower surfaces of the slat tracks and visible portions of the side surfaces of the slat tracks

only, excluding underneath the pinion gear on slat tracks 1 and 3 and underneath the forward and aft upper and lower main rollers on slat tracks 1 through 3.

(ii) For slat tracks 4 through 11 on the left and right wings: Inspect the lower surfaces of the slat tracks only, excluding underneath the pinion gear on slat tracks 4, 6, 7, 9, 10, and 11 and underneath the forward and aft lower main rollers on slat tracks 4 through 11.

(9) Where step 2.5 of Part A of “the VSB” referenced in Transport Canada AD CF-2021-43 specifies applying grease (04-400) in front of the main rollers and side flanges of the slat track, this AD allows applying grease as specified in paragraphs (h)(9)(i) and (ii) of this AD.

(i) For slat tracks 1 through 3 on the left and right wings: Apply grease (04-004) on the slat tracks in the side flanges of the slat tracks, the portions of the slat tracks in front of the forward upper and lower main rollers, and the upper and lower surfaces of the slat tracks between the forward and aft upper and lower main rollers, excluding underneath the aft upper and lower main rollers.

(ii) For slat tracks 4 through 11 on the left and right wings: Apply grease (04-004) on the slat tracks in the side flanges of the slat tracks, the portions of the slat tracks in front of the forward upper and lower main rollers, and the lower surfaces of the slat tracks between the forward and aft lower main rollers, excluding underneath the pinion gear on slat tracks 4, 6, 7, 9, 10, and 11 and underneath the aft lower main roller on slat tracks 4 through 11.

(i) Additional AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request

to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada; or Airbus Canada Limited Partnership's Transport Canada DAO. If approved by the DAO, the approval must include the DAO-authorized signature.

(j) Additional Information

For more information about this AD, contact Chirayu Gupta, Aerospace Engineer, Mechanical Systems and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; email 9-avs-nyaco-cos@faa.gov.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Transport Canada AD CF-2021-43, dated November 29, 2021,

(ii) [Reserved]

(3) For Transport Canada AD CF-2021-43, contact Transport Canada, Transport Canada National Aircraft Certification, 159 Cleopatra Drive, Nepean, Ontario K1A 0N5,

Canada; telephone 888-663-3639; email AD-CN@tc.gc.ca; website

tc.canada.ca/en/aviation.

(4) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this material that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fr.inspection@nara.gov, or go to: www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued on November 28, 2022.

Christina Underwood, Acting Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2022-27390 Filed: 12/16/2022 8:45 am; Publication Date: 12/19/2022]